

REMARKS/ARGUMENTS

1. In the above referenced Office Action:
 - a. Claims 15, 16, 18-21 and 35-38 have been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Malhotra et al. (U.S. Patent No. 7,110,374);
 - b. Claim 17 has been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Malhotra et al. (U.S. Patent No. 7,110,374) and further in view of Brandstetter (U.S. Patent No. 5,005,946);
 - c. Claims 22, 23, 25 and 26 been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Agrawal et al. (U.S. Pub. No. 2003/0108005) and further in view of Malhotra et al. (U.S. Patent No. 7,110,374);
 - d. Claim 24 has been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Agrawal et al. (U.S. Pub. No. 2003/0108005) and Malhotra et al. (U.S. Patent No. 7,110,374) and further in view of Brandstetter (U.S. Patent No. 5,005,946).

The rejections have been traversed and, as such, the applicant respectfully requests reconsideration of the allowability of claims 15-26 and 35-38.

2. Claims 15, 16, 18-21 and 35-38 have been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Malhotra et al. (U.S. Patent No. 7,110,374). The applicant respectfully disagrees with this rejection and the reasoning thereof.

The official action relies on Monin to teach many of the claim elements of the claims. The official action also refers, in the *Response to Arguments* section of the official action, to *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981) and to *In re Merck & Co.*, 800 F2.d 1091, 231 USPQ 375 (Fed. Cir. 1986) for the proposition that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. The applicant notes that the combined references are required to teach all of the claim elements. Thus, if a claim element is missing from each and all of the combination of references, the rejection fails. The discussion of the individual references for the rejections under §103 of the Patent Act is in this spirit, namely, to show that a particular element is missing from all of the

references. If the examiner, therefore, cites a particular reference for teaching a particular element, it is appropriate to argue that the element does not teach a required element as stated in an official action.

Claim 15 as presently constituted requires:

A Wireless Local Area Network (WLAN) device, comprising:

a first baseband processor interface for receiving, processing and generating digital data;

a first radio for receiving the digital data and for transmitting RF signals in a first frequency band according to a first communication protocol and for receiving RF signals in the first frequency band and for producing corresponding digital data to the first baseband processor interface;

a second baseband processor interface for receiving, processing and generating digital data;

a second radio for receiving the digital data and for transmitting RF signals in a second frequency band according to a second communication protocol and for receiving RF signals in the second frequency band and for producing corresponding digital data to the second baseband processor interface,

at least one baseband processor that transmits outgoing data and receives ingoing data through the first and second baseband processor interfaces; and

band selection logic wherein the WLAN device scans a plurality of channels in the first and second frequency bands transmitted according to the first and second communication protocols to select a channel for a subsequent communication. <emphasis added with underlining>

As the examiner has recognized, claim 15 requires each of the above elements to be configured within a single device. The official action states in the explanation for the examiner's logic:

In this case, the Examiner relied on Monin for the teachings of scanning different protocols that are part of one device. More importantly, Monin clearly teaches or suggests that an access point can alternatively be driven to operate in accordance with different WLAN standards, which reads on the plurality of protocols. Moreover, Monin

also illustrates in Figures 5-7 that the plurality of baseband modules, which reads on the plurality of frequency bands of claimed features, are resided in one single device. It is noted that although Monin teaches or suggests using different protocols in one single device; Monin, however does not expressly teach or suggest that they are operate in different channels. Therefore, the Examiner would like to bring in Malhotra to clearly show to the Applicant that the step of selecting a particular channel according to a protocol is taught by Malhotra and/or known in the art.

Thus, the examiner argues that Monin teaches: 1. A plurality of frequency bands resides *in one single (access point type of) communication device*, and 2. Multiple protocols exist *in one single device*. The examiner then argues that Malhotra teaches selecting a particular channel.

The applicant disagrees that Monin's teachings are directed to a single device.

The title of the Monin reference is *FLEXIBLE WIRELESS LOCAL NETWORKS* that, of course suggests that the disclosed invention is directed to networks, not single devices. FIG. 1 is for a “wireless local area network (WLAN)” as stated in [0062]. FIG. 2 is “a block diagram that schematically shows details of network 22” as stated in [0072]. FIG. 3 is “a block diagram that schematically shows details of network 22” as stated in [0074]. FIG. 4 is “a block diagram that schematically shows details of network 22” as stated in [0076]. FIG. 5 is “a block diagram that schematically shows details of network 22” as stated in [0077]. FIG. 6 is “a block diagram that schematically illustrates details of network 22” as stated in [0078]. FIG. 7 is “a block diagram that schematically shows details of network 22” as stated in [0081].

As may be seen, each figure of Monin discloses a network, not a single device.

Further, Monin states in [0082] that the “*configurations of FIGS. 5, 6 and 7 are particularly advantageous in multi-technology network systems, as mentioned above, in which access points 26 can be assigned to implement different network technologies within the same general frequency range.*

Thus, not only do FIGs. 5-7 relate to networks (of plural devices), but the (plural) access points 26 can be chosen to implement different network technologies. Thus, a flexible network according to Monin comprises a plurality of access points 26. These access points 26 are

connected to a control unit (e.g., control unit 28) by a plurality of transport channels 32 “which typically comprise coaxial cables or other media suitable for carrying signals between the control unit and the access points” (*see lines 14-16 of [0065]*). Thus, the Monin network includes a central control unit that communicates with a plurality of access points via a network of coaxial cables. This description is shown very clearly in FIG. 1 in which Monin shows a single control unit and a plurality of access points 26 coupled to the control unit 28 by a corresponding plurality of transport channels 32 which typically comprise the coaxial cables.

The applicant disagrees that Monin’s teachings are directed to a single device that can communicate using a plurality of communication protocols at one time

The applicant concedes that a network disclosed by Monin can include access points that communicate using different protocols including Bluetooth and IEEE 802.11. Monin does not disclose, however, a single device that can communicate using one of a plurality of protocols at one time. Moreover, Monin does not teach a single device scanning channels across the various protocols for a subsequent communication with a device that necessarily also has the ability to communicate over a plurality of protocols, selecting a channel in one of the plurality of protocols and then communicating over the selected channel and protocol.

More specifically, the official action states on page 6, first full paragraph, that Monin teaches:

band selection logic wherein the WLAN device scans the first and second frequency bands transmitted according to the first and second communication protocols (i.e., a plurality of base band modules operating in accordance with different WLAN standards as described at paragraphs 0025-0027, 0071 and 0082).

Moreover, Monin states:

[0028] In other preferred embodiments of the present invention, the identities of the baseband modules are programmable. Although conventional Bluetooth baseband modules have hard-coded identities, the identities of baseband modules based on other standards can be programmed, and programmable Bluetooth baseband modules can also be produced. The programmable baseband modules are built into the access points,

along with the radio modules, and the logical identities of the access points are changed by sending appropriate programming commands from the central control unit to the baseband modules.

Thus, Monin teaches that a (separate) access point can include programmable baseband modules that can assume logical identities of the various protocols based upon programming commands from a central control unit. Monin does not teach, though, that one access point includes circuitry to support multiple protocols at the same time. For example, an access point according to Monin must, under instruction from the centralized (and remote) controller, switch logical identities to transform to a different protocol device. Monin does not teach a single device that can communicate according to the various protocols without having to switch logical identities.

The single device of the claimed invention, however, is operable to support multiple protocols at the same time without having to switch logical identities under the direction of a remote central controller. In essence, the central controller of Monin comprises the plurality of baseband modules, each configured with a different identity for modulating and demodulating data. *See* Monin [0027], lines 3-4. The access points may also contain programmable baseband modules as stated in [0028], but as described before, such modules change logical identity under control and programming by the remote and centralized control unit.

Using the terminology of Monin, a single device of the claimed invention is operable to include a plurality of identities to support communications using the plurality of identities at the same time. Monin does not teach or suggest that an access point may include a plurality of identities to support multiple protocol communications at the same time. Because the claimed invention recites a plurality of radios that support communications over a plurality of different protocols, it is clear that one access point according to claim 15 is operable to support communications over multiple protocols at the same time. While the device of Monin can support being reconfigured to support a different protocol according to the identity stored in the control unit, Monin does not teach that a single access point can support multiple protocols at one time.

Claims 16 and 18-21 are dependent upon claim 15 and introduce additional patentable subject matter. The applicant believes that the reasons that distinguish claim 15 over the present rejection are applicable in distinguishing claims 16-21 over the same rejection.

Claim 35 has similar elements to claim 15 and is rejected for similar reasons. Accordingly, the applicant believes that claim 35 is allowable for the same reasons as claim 15. Thus, claims 36-38 are believed to be allowable because they depend from claim 35.

3. Claim 17 has been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Malhotra et al. (U.S. Patent No. 7,110,374) and further in view of Brandstetter (U.S. Patent No. 5,005,946). The applicant respectfully disagrees with this rejection and the reasoning thereof.

Claim 17 is believed to be allowable as it depends from claim 15 that is believed to be allowable as urged above. More specifically, Brandstetter is cited for teaching a method for multi-channel filtering and more particularly for teaching that interference power includes in-channel and adjacent channel interference. Brandstetter is not cited for teach the deficiencies of Monin as argued above. Thus, the combination of Monin, Mulhatra and Brandstetter fails to teach all of the required elements of claim 17 which depends upon claim 15.

4. Claims 22, 23, 25 and 26 been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Agrawal et al. (U.S. Pub. No. 2003/0108005) and further in view of Malhotra et al. (U.S. Patent No. 7,110,374). The applicant respectfully disagrees with this rejection and the reasoning thereof.

Claim 22 requires:

wherein the single baseband processor, the first and second radios, the first and second baseband processor interfaces, first and second radio interfaces are all a part of a single WLAN device

Regarding claim 22, in the *Response to Arguments* section of the official action, the examiner stated:

Monin clearly teaches at paragraph 0071 that the plurality of protocols is supported in one single device, and a protocol is selected for operation. Moreover, the plurality of baseband modules is resided in one single device.

The applicant has underlined the portion of Para. [0071], which is reproduced below, that they believe the examiner considers poignant to his point.

[0071] The individual identities of identity modules 30 may correspond not only to the relevant frequency and/or timing characteristics of access points within a single network technology, but may also refer to different network technologies that are within the transmission/reception capability of access points 26 and are supported by channels 32 of the transport network. For example, assuming that the access points are equipped to operate in the 2.45 GHz band with 100 MHz bandwidth, some of the identity modules may have Bluetooth identities, while others may have identities corresponding to different protocol and air interface schemes, such as IEEE 802.11b. Depending on the implementation details, any given access point in network 22 can be assigned to serve either Bluetooth, HiperLAN/2 or 802.11 -type mobile stations, and can be later reassigned to serve other types if required. In this manner, the system can serve mobile stations in a preferred manner by allowing different types of wireless communication standards. The system can also allow standards that interfere with each other to co-exist by implementing spatial multiplexing. <Emphasis added>

In response, the applicant observes that Para. [0071] is part of the description of FIG. 1. FIG. 1, however, is directed to a network. As may be seen in FIG. 1, control unit 28 includes a plurality of identity modules 30 which define the identities of the access points 26 by defining operational characteristics that may be used to support a communication protocol such as 802.11 or Bluetooth as is specified in Para. [0068]. These identities are “transferred” to the (separate) access points as necessary. See Para. [0069], line 5, where Monin states “*the logical identity of AP1 may be transferred to AP2 in a manner transparent to the mobile station*”.

Thus, Monin teaches that the logical identity information is stored within the control module and is delivered to an access point according to the type of communication protocol that the access point is to support. This description does not mean that an access point can support multiple protocols at once. Moreover, the multiple identities 30 are stored within a control unit

28 that is separate from the access points 26. There is no showing that a single access point includes multiple identities and the capability to simultaneously support multiple protocols.

The official action relies on Agrawal to teach or suggest frequency hop collision avoidance in a multi-channel Bluetooth enabled packet transmission system. The action relies on Malhotra for the teaching or suggestion of band selection logic in which a device scans a plurality of channels in first and second frequency bands to select a channel or a subsequent communication. Even if Agrawal and Malhotra teach these elements as suggested, the applicant notes that Monin is deficient as argued above and that Agrawal and Malhotra to not provide teachings that are directed to the deficiencies of Monin as shown above. Accordingly, the combination of Monin, Agrawal and Malhotra fails to teach all of the required elements of claim 22.

Claims 23-26 are dependent upon claim 22 and introduce additional patentable subject matter. The applicant believes that the reasons that distinguish claim 22 over the present rejection are applicable in distinguishing claims 23-26 over the same rejection.

5. Claim 24 has been rejected under 35 USC § 103 (a) as being unpatentable over Monin et al. (U.S. Pub. No. 2002/0197984) in view of Agrawal et al. (U.S. Pub. No. 2003/0108005) and Malhotra et al. (U.S. Patent No. 7,110,374) and further in view of Brandstetter (U.S. Patent No. 5,005,946). The applicant respectfully disagrees with this rejection and the reasoning thereof.

Brandstetter is cited for teaching a method for multi-channel filtering and more particularly for teaching that interference power includes in-channel and adjacent channel interference. Brandstetter is not cited for teach the deficiencies of Monin as argued above. Accordingly, it is believed that the combination of Monin, Agrawal, Malhotra and Brandstetter fail to teach all of the required elements of claim 24.

CONCLUSION

For the foregoing reasons, the applicant believes that claims 15-26 and 35-38 are in condition for allowance and respectfully request that they be passed to allowance.

The Applicant hereby rescinds any disclaimer of claim scope made in the parent application or any predecessor application in relation to the instant application. The Examiner is advised that any such previous disclaimer and the prior art that it was made to avoid, may need to be revisited. Further, the claims in the instant application may be broader than those of a parent application. Moreover, the Examiner should also be advised that any disclaimer made in the instant application should not be read into or against the parent application.

Extension of time fees are being paid concurrent with the filing of this response. No additional fees are believed to be due. In the event that additional fees are due or a credit for an overpayment is due, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Garlick Harrison & Markison Deposit Account No. 50-2126.

The Examiner is invited to contact the undersigned by telephone or facsimile if the Examiner believes that such a communication would advance the prosecution of the present invention.

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